Double Block Algebra
Linear – Parallel/Perpendicular & Solutions

Name:
Block:

1. Write a slope-intercept equation that has a perpendicular slope to y = -4/9x + 5 and the same y-intercept as y = 10.

2. Write a slope-intercept equation that has a parallel to the line y = 1/2x - 2 and goes through the point (4, 10)

3. Write a slope-intercept equation that has a parallel slope to y = 3x + 12 and the same y-intercept as -2 + 5x = y

4. Write a slope-intercept equation that has a perpendicular slope to y = -3x + 1 and the same y-intercept as 13 + 10x = y.

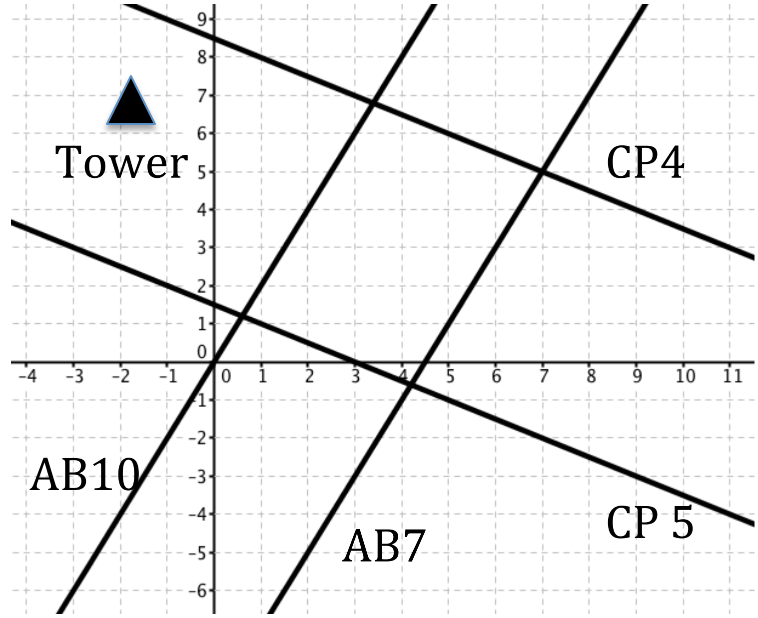
5. Write a slope-intercept equation that has a perpendicular slope to y = -2/3x and goes through the point (0,5)

6. Write a slope-intercept equation that has a parallel slope to 8 + 4x = y and goes through the point (2, 1)

7. Write a slope-intercept equation that has a perpendicular slope to 7x – 2 = y and the same y-intercept as y = 8x

8. How many solutions two linear functions have? Give all possible outcomes and examples of each.

9. The picture at the right represents runways at an airport. All runways run parallel or perpendicular to each other. Runways that start with AB are parallel to all other runways that start with AB. If runway AB 10 has an equation of $y = 2x$, write an equation for all other runways.



AB7:

CP4:

CP5:

Write an equation for another runway that would start with CP.

Write an equation for another runway that would start with AB.

For problems 10 – 15, determine the number of solutions for each set of equations.

10. $y = 4 - 5x$
$y = 6 + 2x$

11. $y = 2/3x + 9$
$y = 2/3x$

12. $8 - 2x = y$
$-2x + 8 = y$

13. $y = 6/7x + 2/3$
$y = -7/6x - 1$

14. $5 + 4/5x = y$
$y = 5 - 4/5x$

15. $x = 7$
$y = -1/2$

For problem 16 consider the function **$Y = 5x + 8$.** Write values of a and b for the equation **$g(x) = b - ax$** so that each statement is true.

16. a. The equations y and g(x) have infinite solutions. a = b =

b. The equations g(x) and y have one solution. a = b =

c. The equations y and g(x) have zero solutions. a = b =